



## ***Comments to DOL***

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**Comments of the National Institute for Occupational Safety and Health  
in Response to the Department of Labor  
Request for Comments on Proposed Requirements for  
DOL Agencies' Assessment of Occupational Health Risks**

**RIN 1290-AA23**

**Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health  
Cincinnati, Ohio**

**September 26, 2008**

The National Institute for Occupational Safety and Health (NIOSH) has reviewed the Office of the Assistant Secretary for Policy, Office of the Secretary, Department of Labor (DOL) request for comments on the Notice of Proposed Rulemaking for *Requirements for DOL Agencies' Assessment of Occupational Health Risks* published in the Federal Register (FR) on August 29, 2008 [73 FR 50909]. Based upon this review, NIOSH is providing comments pertaining to the assessment of working lifetime and related exposures as interpreted under the proposed requirements. NIOSH is concerned about the following key issue:

*“Risk assessments shall utilize the best available evidence, and the latest available scientific data in the field, including industry-by-industry evidence relating to working life exposures.”*

NIOSH supports the use of the best available evidence and the latest scientific data, as long as those data are appropriate and reliable. NIOSH would welcome reliable data on the distribution of working life exposures on an industry-by-industry basis. To date, NIOSH has not identified sources or techniques that would permit development of scientifically and statistically valid estimates of working life values that could be used in place of default values such as the 45-year working life value customarily used.<sup>1</sup> Therefore, the Institute recommends using the default assumption of a 45-year working lifetime until scientifically defensible alternatives are developed. As the agency responsible for developing recommendations for occupational exposure limits, NIOSH is willing to consider a program of research to assess the validity and options for determining industry-specific or occupation-specific working life default values.

A major challenge to using industry-specific data as surrogates for working lifetime is the assumed lack of risk once a worker leaves a particular industry. This assumption is tenuous because a worker may be exposed in a different industry to either the same chemical or a different chemical with the same toxic effect. For example, a welder will likely be exposed to welding fumes for a lifetime regardless of changes in employer or industry. Since certain classes of chemicals impact the same organ system, or produce the same type of effect, effects from cumulative exposures experienced in one industry may be exacerbated in another unaccounted work setting.

NIOSH notes that the working lifetime of many workers in the United States is increasing. The age of eligibility for full Social Security benefits has been raised to 67 and many workers continue to work beyond the traditional retirement age of 65. Consequently, even the standard assumption of a 45-year working lifetime may result in underestimation of working life exposures. The use of extended work-shifts and overtime, particularly common in coal mining, for example, may contribute further to underestimation of working life exposures.

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<sup>1</sup> The 45-year working lifetime has been widely used in risk assessments by both OSHA and NIOSH. For example, NIOSH used the 45-year working lifetime as a basis for risk assessments of 1,3-butadiene [Dankovic et al. 1993; Stayner et al. 2000], and hexavalent chromium [Park et al. 2004; Park and Stayner 2006]. OSHA chemical standards that used the 45-year working lifetime include hexavalent chromium [OSHA 2006]; methylene chloride [29 CFR 1910.1052 and OSHA 1997, 1998]; 1,3-butadiene [OSHA 1996]; and formaldehyde [OSHA 1987]. In the preamble to the final hexavalent chromium standard, OSHA [2006] states:

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*“OSHA’s estimate of lung cancer risk from a 45 year occupational exposure to Cr(VI) the previous PEL of 52 ug/m<sup>3</sup> is 101 to 351 excess deaths per 1000 workers. This range, which is defined by maximum likelihood estimates based on the Gibb and Luippold epidemiological cohorts is OSHA’s best estimate of excess risk. . . . The 45-year exposure estimates satisfy the Agency’s statutory obligations to consider the risk of material impairment for an employee with regular exposure to the hazardous agent for the period of his working life (29 USC 651 et seq.). Occupational risks from Cr(VI) exposure to less than a full working lifetime are considered in Section VII on the Significance of Risk and in Section VIII on the Benefits Analysis.”*

## References

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